

ABSTRACT OF THE DISCLOSURE

An apparatus and method to provide a tapered electrode in an acoustic resonator. A piezoelectric (PZ) layer, such as Aluminum Nitride (AlN), is formed over a bottom electrode having a tapered end. A top electrode is positioned on the PZ layer. The tapered end of the bottom electrode creates a mild topography to the under layer of the PZ material to prevent cracking in the PZ layer. The tapered end also decreases acoustic losses in the acoustic resonator because the PZ grains are highly oriented. In one embodiment, the acoustic resonator is a film bulk acoustic resonator (FBAR).